

Full HD | Gen II

# Star SAFIRE® HD

SECOND GENERATION ADVANCEMENT  
WORLD'S FIRST AND ONLY FULL HIGH DEFINITION  
MULTI-SPECTRAL IMAGING SYSTEM



## APPLICATIONS

ISR  
SAR  
MARITIME PATROL  
BORDER PATROL  
UAVs  
FORCE PROTECTION

## FEATURES

Second generation full-HD  
SWIR band sensor  
High def color in low light  
Single LRU configuration  
120x zoom ratio  
Advanced programmable hardware  
HD-SDI digital output  
Enhanced standard definition video  
Optimized usability  
Multiple laser payloads  
Maintain SAFIRE-family compatibility  
Commercially developed/  
MIL qualified

## BENEFITS

Full high definition mega-pixel resolution imagery from all sensors\* for superior range and imaging performance  
See more than others can see using the optional SWIR short wave infrared payload for expanded multi-spectral day and night imaging  
Extend full color imaging into the dark with full high definition clarity and with expanded wide dynamic range  
Optional configuration minimizes the line replaceable units to simplify installations where space & weight is a premium  
High-magnification optics extend detection range to the horizon without sacrificing wide FOV situational awareness  
Software-defined, real-time HD image processing features extract critical image detail, blend sensor imagery & help overcome atmospheric haze  
High bandwidth HD-SDI (aka SMPTE-292M) video channels with symbology overlays comply with all government HD standards  
Analog video installations will benefit from the HD's high-resolution digital sensors and high-quality optics  
View and track ground locations using the fully-embedded IMU; follow moving targets with the multi-mode Autotracker  
Covertly illuminate wide areas, point out distant targets to other forces, and determine target distance and location  
Total cable compatibility allows operators to upgrade existing SAFIRE-family installations to High-Definition with plug-and-play simplicity  
All-weather design is qualified to the most demanding requirements of MIL-STD-810 and 461

\*Excluding SWIR band sensor





# Star SAFIRE® HD

## THERMAL IMAGER

Sensor type	640 x 512 InSb MWIR FPA (standard) 1280 x 720 InSb MWIR FPA (optional) 640 x 512 QWIP LWIR FPA (optional)
Resolution	720/1080 HD and NTSC/PAL
Wavelength	3-5 µm response
FOVs	30° to 0.25° (with standard FPA)
Zoom ratio	120x

## COLOR HIGH DEFINITION CAMERA (OPTIONAL)

Sensor type	Color CCD-TV, Progressive scan
Resolution	720/1080 HD and NTSC/PAL
FOVs	29° to 0.25°
Zoom ratio	120x

## COLOR LOW LIGHT HIGH DEFINITION CAMERA (OPTIONAL)

Sensor type	Color NIR CCD, Progressive Scan
Resolution	720/1080 HD and NTSC/PAL
FOVs	55° to 1.5°

## SWIR SHORT WAVE IR CAMERA (OPTIONAL)

Sensor type	InGaAs; extended NIR sensitivity optional
Resolution	720/1080 HD and NTSC/PAL
FOVs	28° to 0.25°

## LASER PAYLOADS (OPTIONAL)

Rangefinder	up to 25 km, Class 1 (eyesafe)
Illuminator	1 W or 2 W, Class 4
Pointer	100 mW, Class 3b

## DIGITAL IMU/GPS+ (OPTIONAL)

Tightly-coupled, fully-integrated, IMU & GPS for geo-pointing and target geo-location capability

## SYSTEM PERFORMANCE

System type	6-axis stabilization
Az. coverage	360° continuous
El. coverage	+30° to -120°
Airspeed	405 KIAS

## SYSTEM INTERFACES

Digital video	SMPTE 292M
Analog video	NTSC/PAL
Control	RS-232, RS-422, Ergonomic Laptop or Hand-held
Data	RS-232, RS-422, ARINC 419/429, MIL-STD-1553B

## ENVIRONMENTAL

Standards	MIL-STD-810E & MIL-STD-461F
Operating temperature	-40°C to 55°C

## POWER REQUIREMENTS

Voltage	22-29 VDC (per MIL-STD-704E)
Consumption	200 W (650 W max)

## DIMENSIONS, WEIGHT & MOUNTING

Single LRU	15.0" x 18.5" (380 mm x 475 mm)
Dual LRU	15.0" x 17.5" (380 mm x 445 mm)
TFU Weight	<99 lbs (<45 kg)
Mounting	compatible with existing SAFIRE installations

## OTHER OPTIONS & ACCESSORIES

Long-wave IR (LWIR) imager, Automatic Video Tracker, Navigation/Radar Interfaces, Quick-Disconnect Mounts, High Resolution Displays & Recorders, Moving Map Systems, High-Definition Downlinks

Reg. US Patent 7,474,451 and 7,264,220, other patents pending

## CORPORATE HEADQUARTERS

FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
USA  
PH: +1 800.727.3547

## BOSTON

FLIR Systems, Inc.  
25 Esquire Road  
North Billerica, MA 01862  
USA  
PH: +1 800.464.6372

## HUNTSVILLE

FLIR Systems, Inc.  
675 Discovery Drive  
Suite 103  
Huntsville, AL 35806  
USA  
PH: +1 256.325.3547

## WASHINGTON, D.C.

FLIR Systems, Inc.  
2800 Crystal Drive  
Suite 330  
Arlington, VA 22202  
USA  
PH: +1 703.416.6666

## EUROPE

FLIR Systems Ltd.  
2 Kings Hill Avenue  
West Malling, Kent  
ME19 4AQ  
United Kingdom  
PH: +44.1732.220011

## CANADA

FLIR Systems Ltd.  
5230 South Service Road  
Suite 125  
Burlington, ON L7L 5K2  
Canada  
PH: +1 800.613.0507

## SWEDEN

FLIR Systems AB  
Rinkebyvagen 19  
P.O. Box 3  
SE-182 11 Danderyd  
Sweden  
PH: +46.8.753.2500

## MIDDLE EAST

FLIR Systems Middle East  
FZCO  
Unit C-13  
Dubai Airport Free Zone  
P.O. Box 54262  
Dubai  
United Arab Emirates  
PH: +9714.299.6898

[www.flir.com/GS](http://www.flir.com/GS)



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